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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,733	07/27/2001	Ruth Dammeri	5848.165USWO	9852

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

MAYO III, WILLIAM H

ART UNIT PAPER NUMBER

2831

DATE MAILED: 08/28/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,733

Applicant(s)

DAMMERI ET AL.

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 & 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in PCT Application No. PCT/SE99/020057, filed on November 12, 1999.

Information Disclosure Statement

2. The information disclosure statements filed July 27, 2001 & December 26, 2001 have been submitted for consideration by the Office. They have been placed in the application file and the information referred to therein has been considered.

Oath/Declaration

3. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in Sweden on November 12, 1999. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date. Specifically, the box detailing whether foreign priority is claimed is not checked.

Drawings

4. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

Specification

5. The abstract of the disclosure is objected to because it contains the misspelled word "vulcanising", in line 13. Applicant should replace the term with the correct term – vulcanizing--.

6. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities: The specification contains a few misspelled words, such as "stablising", on page 1, line 29, "vulcanisation" and vulcanising", on page 2, lines 16-25. The applicant should proofread the specification and correct all instances of misspelled words.

8. Throughout the specification, there is reference to an abbreviation for dibutyl tin diaurate (DBTL). The applicant should replace the abbreviation with –DBTDL--.

Appropriate correction is required.

Claim Objections

9. Claims 1 & 9-10 are objected to because of the following informalities: Claims 1 & 9, contain the term "characterised", which is misspelled. The applicant should replace the term with –characterized--. Claim 10 comprises the term "vulcanising", which is misspelled. The applicant should replace the term with –vulcanizing--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 1 recites the limitation "the hydrocarbyl radical(s)" throughout the claim, which is confusing and renders the claim indefinite. It is unclear whether the applicant is referring to the previous mentioned "at least one hydrocarbyl radicals" or introducing a new hydrocarbyl radical. If the applicant is referring to the previous mentioned term, then he/she should recite the term with consistency. If the applicant is referring to a new hydrocarbyl radical, then he/she should make the term more distinguishable.

13. Claims 2-13 are dependent upon a rejected claim, and therefore are rejected.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Own Admission of Prior Art (herein referred to as AOAPA) in view of Dammert et al (Pat Num 6,005,055, herein referred to as Dammert). AOAPA discloses under the heading "Technical Background" electric power cables for medium and high voltage cables (see Pages 1-4 of specification). Specifically, AOAPA discloses that medium to high voltage cables are known to comprise an electrical conductor surrounded in order by an inner semi-conducting layer, an insulating layer, and an outer semi-conducting layer (Page 1, lines 9-16), wherein the insulating layer is typically of more than 2mm thick (Page 4, lines 4-10), and comprises a cross linked polymer of a composition that comprises a cross linkable polymer (i.e. ethylene polymers, Page 3, lines 8-10) with a hydrolysable silane group and a silanol condensation catalyst (Page 3, lines 10-18), such as dibutyl tin diaurate (DBTDL, Page 3, lines 19-23). With respect to claim 2, AOAPA discloses that a typical insulating layer will have a thickness of more than 5mm (Page 4, lines 7-10). With respect to claim 9, AOAPA discloses a method of preparing the typical medium and high voltage power cable, wherein a conductor is surrounded in order an inner semi-conducting layer, an insulating layer comprising a cross linkable

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polymer (ethylene polymer) with a hydrolysable silane groups (DBTDL) and an outer semiconducting layer to form the cable (Pages 1 & 3, lines 9-16 & 8-23), in the presence of steam (Page 3, lines 12-15). With respect to claim 9, AOAPA discloses that the presence of steam is capable of being at superatmospheric pressure (i.e. extrusion pressure). With respect to claims 11-12, AOAPA discloses that the cross linking is capable of being carried out at a pressure of 0.2-2.5 Mpa or 0.8-1.2 Mpa (i.e. extrusion pressures). With respect to claim 10, AOAPA discloses that crosslinking is commonly done in a vulcanizing tube (Page 2, lines 14-25). With respect to claim 13, AOAPA discloses that crosslinking is carried out in the presence of saturated steam (Page 3, 12-15).

However, AOAPA doesn't disclose the silanol condensation catalyst being of formula I, ArSO_3H , or a precursor thereof, Ar being a benzene ring substituted with at least one hydrocarbyl radical such that the total number of carbon atoms of the hydrocarbyl radical is 8-20, or a naphthalene ring substituted with at least one hydrocarbyl radical such that the total number of carbon atoms of the hydrocarbyl radical is 4-18, and the catalyst of formula I contains 14-28 carbon atoms in total (claim 1), nor the composition being hydrophobic (claim 3), nor the hydrophilic group being selected from siloxane, amide, anhydride, carboxylic, carbonyl, hydroxyl, and ester groups (claim 4), nor the crystalline part of the polymer being at most 60% by weight (claim 5), nor the hydrocarbyl radical in formula I being an alkyl substituent with 10-18 carbon atoms (claim 6), nor the alkyl substituent having 12 carbon atoms and selected

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from dodecyl and tetrapropyl (claim 7), nor the polymer composition including 0.0007-3% by weight of silanol condensation catalyst (claim 8).

Dammert teaches cross linkable polymer composition containing a crosslinkable polymer with hydrolysable silane groups and at least one silanol condensation catalyst that reduces or obviates the drawbacks of prior art catalysts, such as DBTDL, that give poor performance at normal temperatures and do not require the presence of water baths or steam cabinets, during the crosslinking production of cable insulations (Page 2, lines 7-15 & 28-31). Specifically, with respect to claim 1, Dammert teaches a cross linkable polymer composition containing a hydrolysable silane group and at least one the silanol condensation catalyst being of formula I, ArSO_3H , or a precursor thereof, Ar being a benzene ring substituted with at least one hydrocarbyl radical such that the total number of carbon atoms of the hydrocarbyl radical is 8-20 (Col 2, lines 49-50), and the catalyst of formula I contains 14-28 carbon atoms in total (Col 2, lines 37-50). With respect to claim 3, Dammert teaches that the typical composition contains a cross linkable polymer (ethylene) that includes carboxylics (Col 3, lines 45-48), which inherently makes the composition hydrophilic. With respect to claim 4, Dammert teaches that the typical composition contains a cross linkable polymer (ethylene) that includes carboxylics (Col 3, lines 45-48), which inherently makes the composition hydrophilic. With respect to claim 5, Dammert teaches that the cross-linkable polymer composition comprises a crystalline part of the polymer that may be at most 60% by weight (i.e. up to 60, Col 5, lines 10-12). With respect to claim 6, Dammert teaches that the hydrocarbyl radical in formula I may be an alkyl substituent with 10-18 carbon atoms (i.e.

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12, Col 3, lines 8-11). With respect to claim 7, Dammert teaches that the alkyl substituent has 12 carbon atoms (Col 3, lines 8-11) and may be selected from dodecyl and tetrapropyl (Col 3, lines 12-14). With respect to claim 8, Dammert teaches that the polymer composition includes 0.0007-3% by weight of silanol condensation catalyst (Col 3, lines 24-30).

With respect to claims 1 & 3-8, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulating layer of AOAPA to comprise the polymeric component configuration as taught by Dammert because Dammert teaches that such a composition configuration reduces or obviates the drawbacks of prior art catalysts, such as DBTDL, which give poor performance at normal temperatures and does not require the presence of water baths or steam cabinets, during the crosslinking production of cable insulations (Page 2, lines 7-15 & 28-31).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Schomburg (Pat Num 4,767,894), which discloses a high voltage cable having a silane composition, Sultan et al (Pat Num 6,166,120), Sutlan et al (Pat Num 5,350,812), Cloetens et al (Pat Num 4,859,810), Lloyd et al (Pat Num GB 2 317 139 A), Dammert et al (Pat Num 5,891,979), and Ribarits et al (Pat Num 6,080,810), all of which disclose silane groups.

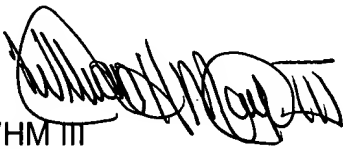
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Communication

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


WHM III
August 24, 2002